



1,4-Dioxane in Personal Care and Cleaning Products Public Meeting

June 28, 2019

Email public comments to:
SaferConsumerProducts@dtsc.ca.gov



Department of Toxic Substances Control



CalEPA

Safer Consumer Products Program Overview

Chemicals

1 Candidate Chemical List

A compilation of potentially harmful chemicals

Based on 23 authoritative lists.



List changes triggered by:

- Authoritative list changes
- Stakeholder petitions
- DTSC Rulemaking

Candidate Chemical database:
www.calsafer.ca.gov

Products (Product-Chemical Combinations)

2 Priority Products

Selection criteria:

1. Potential for exposure to the Candidate Chemicals
2. Potential for harm to human health or the environment

Products selected from categories in the Priority Product Work Plan.

Products are adopted through a transparent rulemaking process with stakeholder input.

Stakeholders may submit petitions recommending potential Priority Products.

Alternatives Selection (Industry Step)

3 Alternatives Analysis

Manufacturers must ask:

Is the chemical necessary?

Is there a safer alternative?

Have regrettable substitutes been avoided?

Manufacturers weigh trade-offs, taking into account ecological, life cycle, and economic impacts to produce an Alternatives Analysis (AA) report.

- Manufacturer recommends selected alternative
- Confidential business information is protected
- Transparent evaluation of AA with public input

4 Regulatory Response

Possible Regulatory Responses:

- Additional information to DTSC
- Additional information for consumers
- Additional safety measures
- Restrictions or prohibitions on sales
- End-of-life product stewardship
- Research funding

Regulatory Responses are intended to make products safer based on submitted AAs.



Purpose of today

- **Hear concerns related to 1,4-dioxane in consumer products**
 - Potential for adverse impacts
 - Concerns associated with 1,4-dioxane in wastewater
 - Potential impacts of 1,4-dioxane on beneficial reuse of wastewater



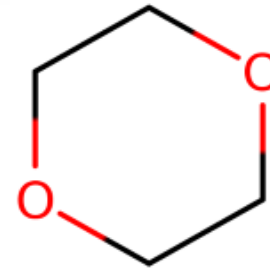
Meeting Format

- DTSC 1,4-dioxane overview
 - Presence in products, exposure concerns, potential for adverse impacts
 - More information: <https://dtsc.ca.gov/scp/1-4-dioxane/>
- Stakeholder presentations
- General public comment period
 - In person
 - Through email:
SaferConsumerProducts@dtsc.ca.gov



1,4-Dioxane Basics

- Small, highly soluble, persistent in water
- Volatile
- Likely carcinogen per the US EPA
 - any route of exposure



- Doesn't stick to solids (filters, particulates)
- Not removed by most standard water treatment



Relevant Work Plan Product Categories

Cleaning Products

*Laundry detergents, dish
detergents*



Beauty, Personal Care, and Hygiene Products

Shampoo, body wash, cosmetics



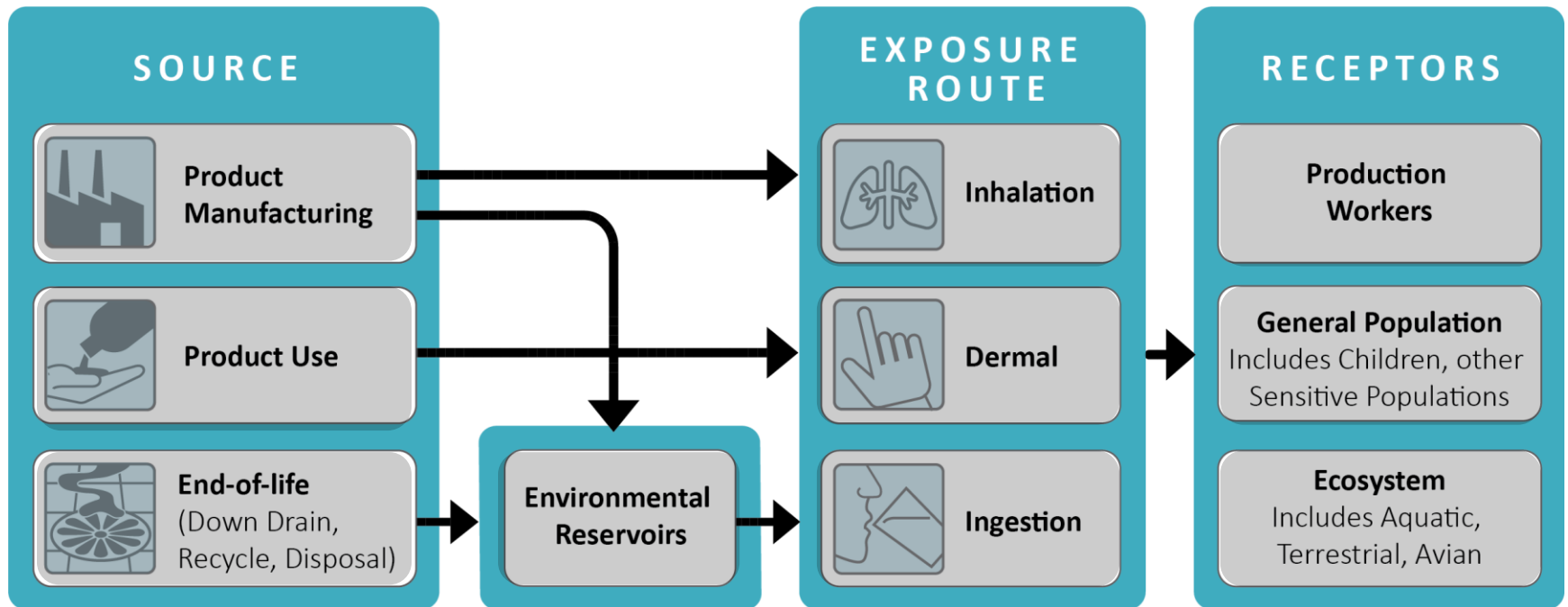
1,4-Dioxane Presence in Products

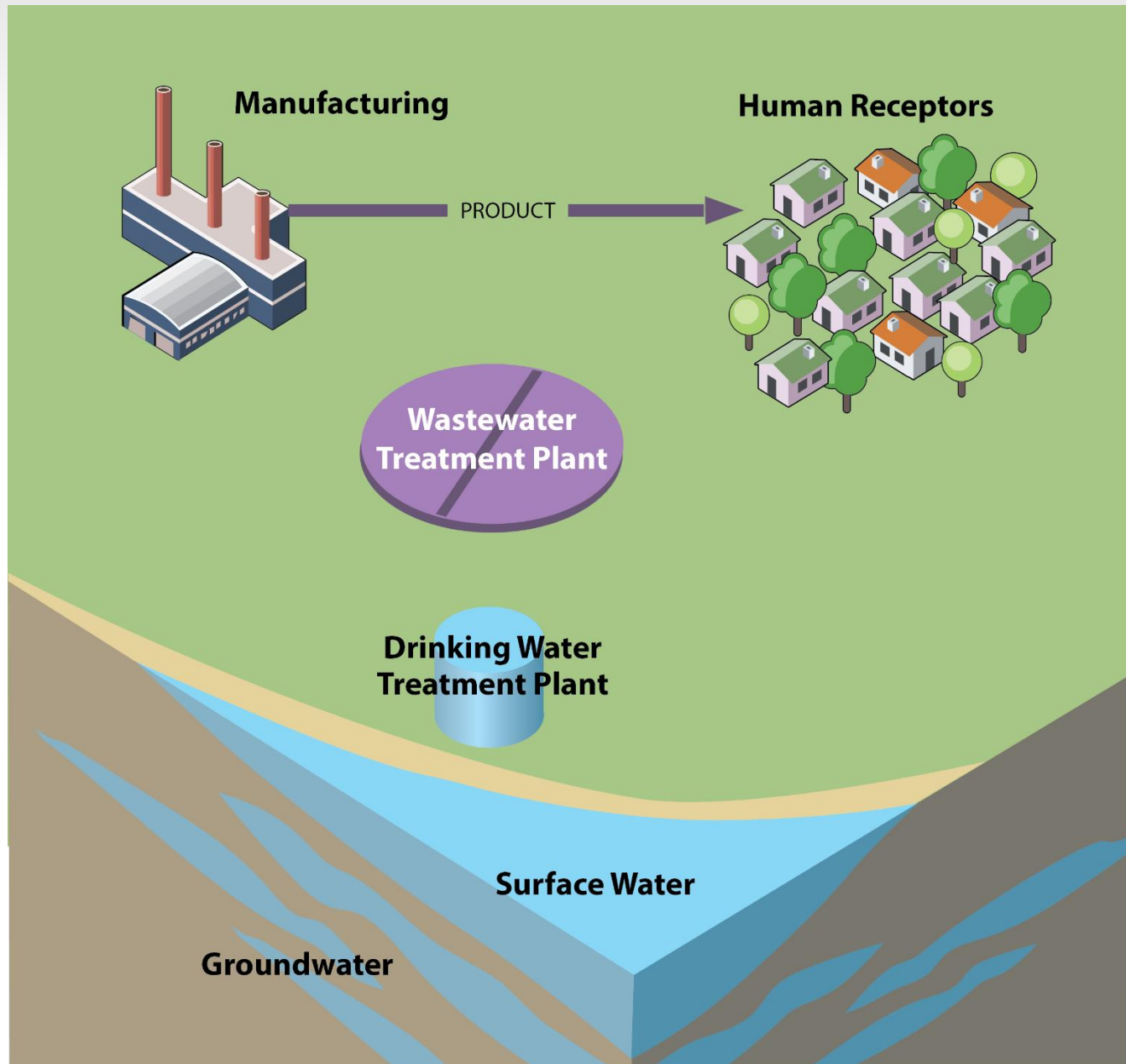
- Contaminant formed in the production of ethoxylated surfactants and other raw materials
 - Not included on label
 - Often associated with ingredients that end in, or contain, “eth”
 - *Sodium laureth sulfate, polyethylene glycols (PEG)*
- DTSC product testing

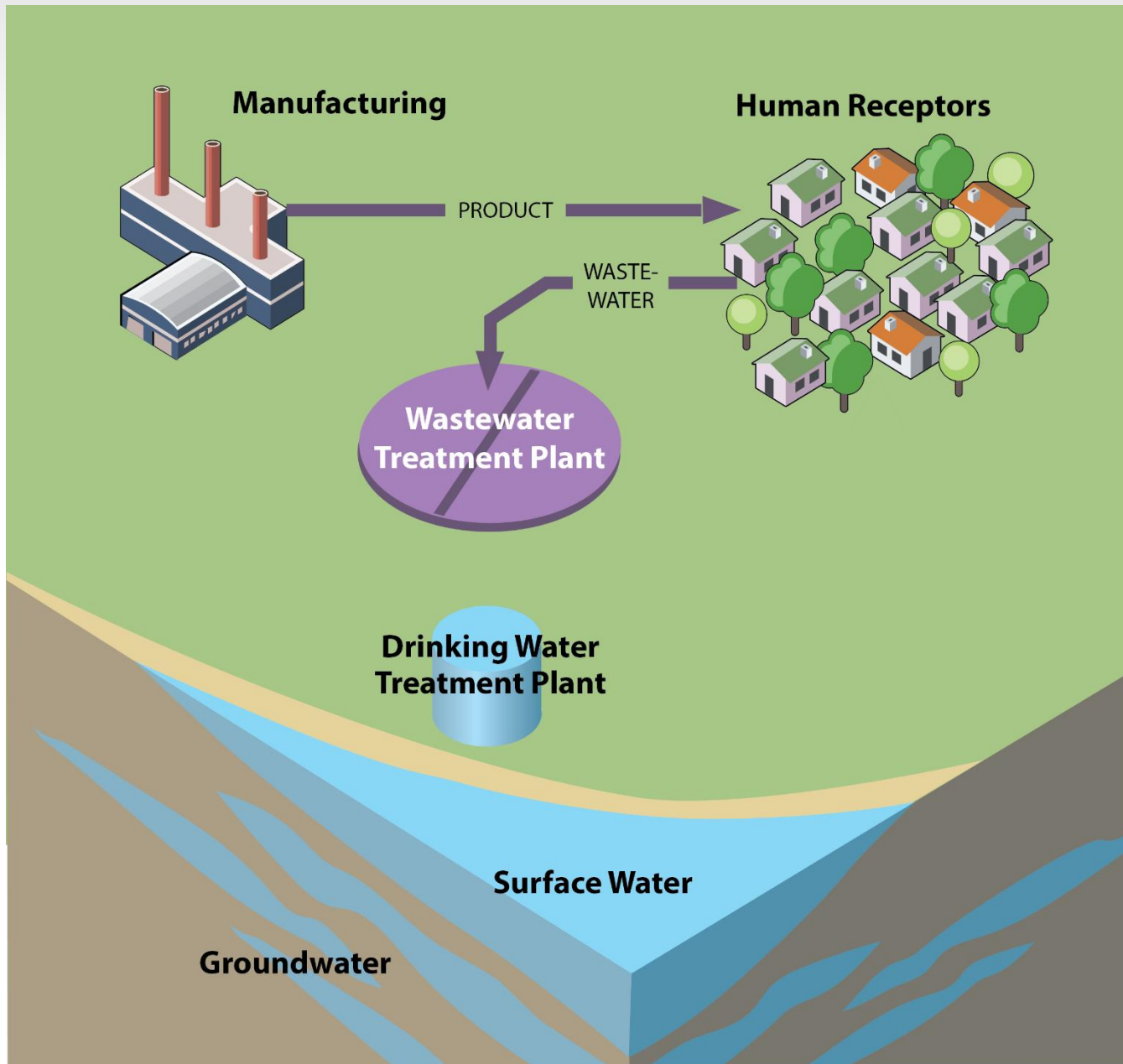
INGREDIENTS: WATER, SODIUM LAURETH SULFATE, DIMETHICONE, COCAMIDE MEA, GLYCOL DISTEARATE, COCO-BETAINE, ALCOHOL, SODIUM BENZOATE, SODIUM CHLORIDE, SODIUM HYDROXIDE, PPG-5-CETETH-20, POLYQUATERNIUM-6, SALICYLIC ACID, HONEY, LINALOOL, PROPOLIS EXTRACT, CAPRIC TRIGLYCERIDE, FRAGRANCE, CARBOMER, GERANIOL, CITRIC ACID, CITRONELLOL, LAURETH-23, LAURETH-4, COUMARIN, LAVENDER OIL, ROYAL JELLY, GLYCERIN, PHYLLANTHUS EMBLICA

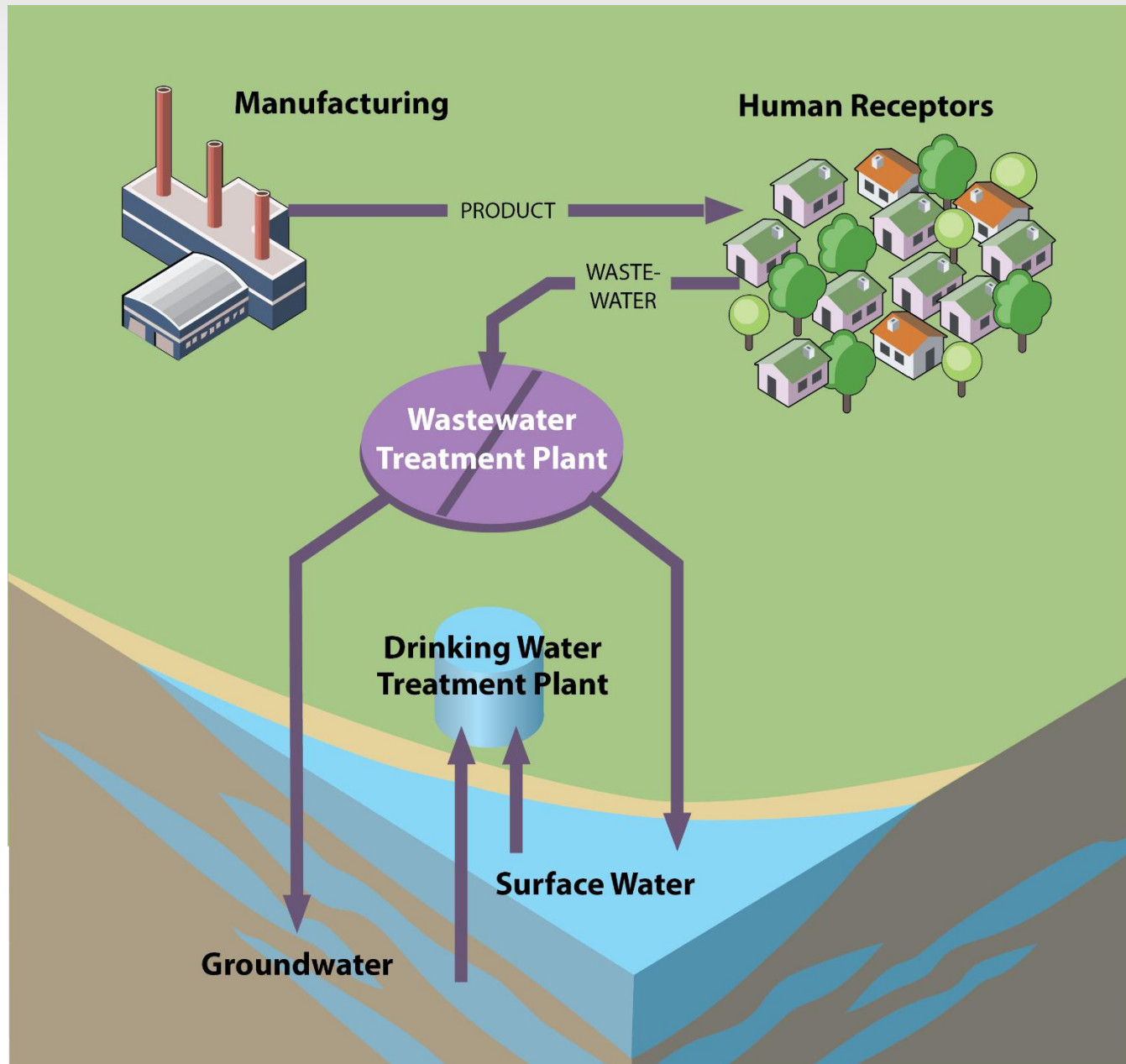


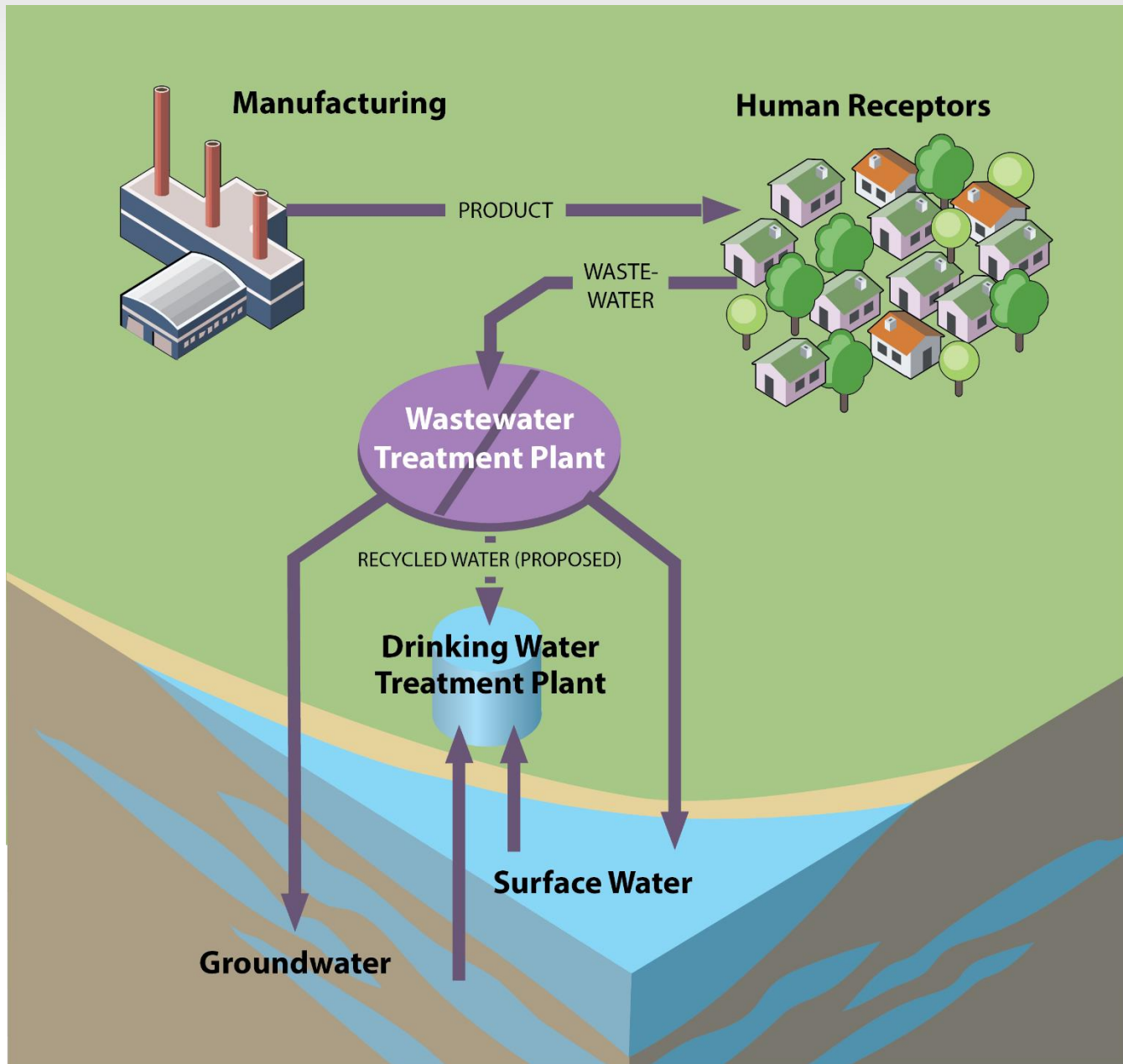
1,4-Dioxane Exposure Concerns

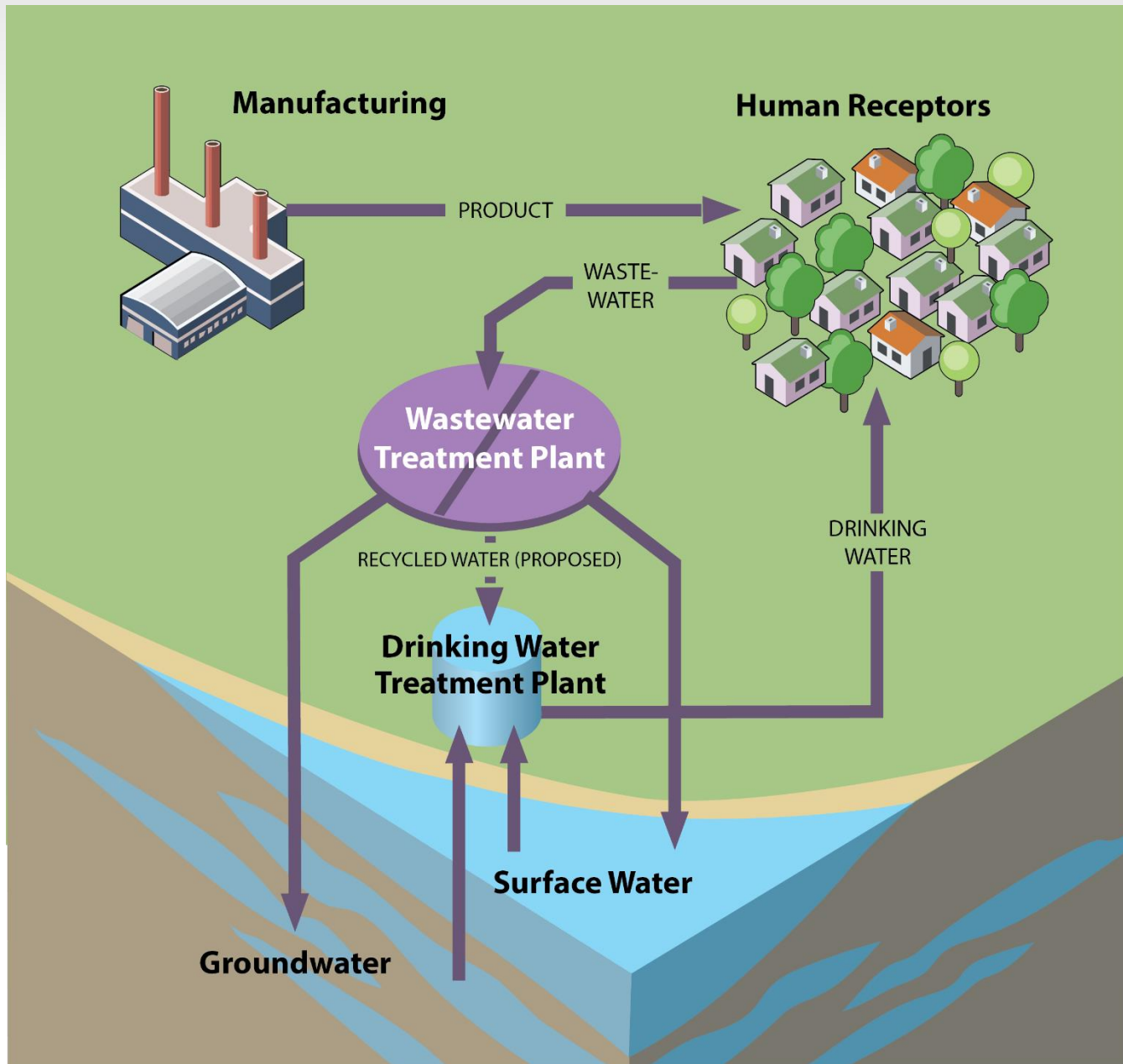




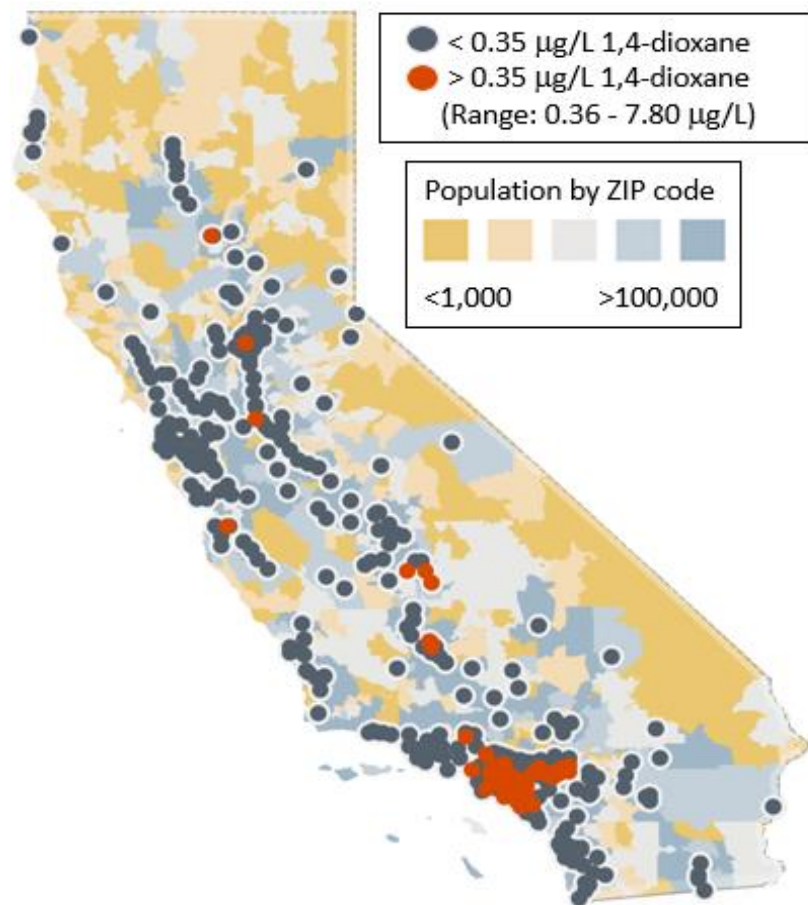








1,4-Dioxane in California Drinking Water



Counties with 1,4-dioxane detections in drinking water sources and systems

County	Max. detect ($\mu\text{g/L}$)	% of CA Population
Los Angeles	53	26%
Orange	26.7	8%
Santa Barbara	16	1%
Monterey	3.9	1%
San Diego	1.2	8%
Sacramento	1.1	4%
Total		48%

State Water Board data (2003-2018)**

US EPA 2013-2015 Data*

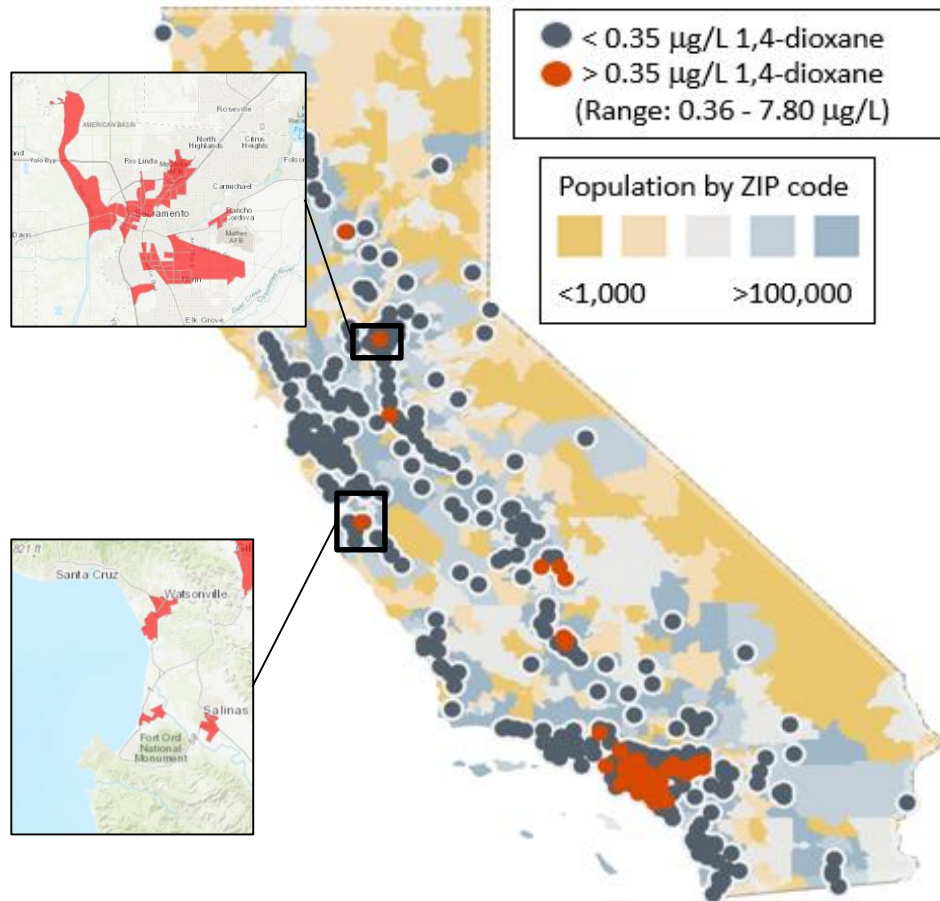
15

* <https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule>

** https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/EDTlibrary.html



Sensitive Sub-Populations: Environmental Justice Communities



"A mapping tool to help identify California communities... where people are especially vulnerable to pollution's effects."

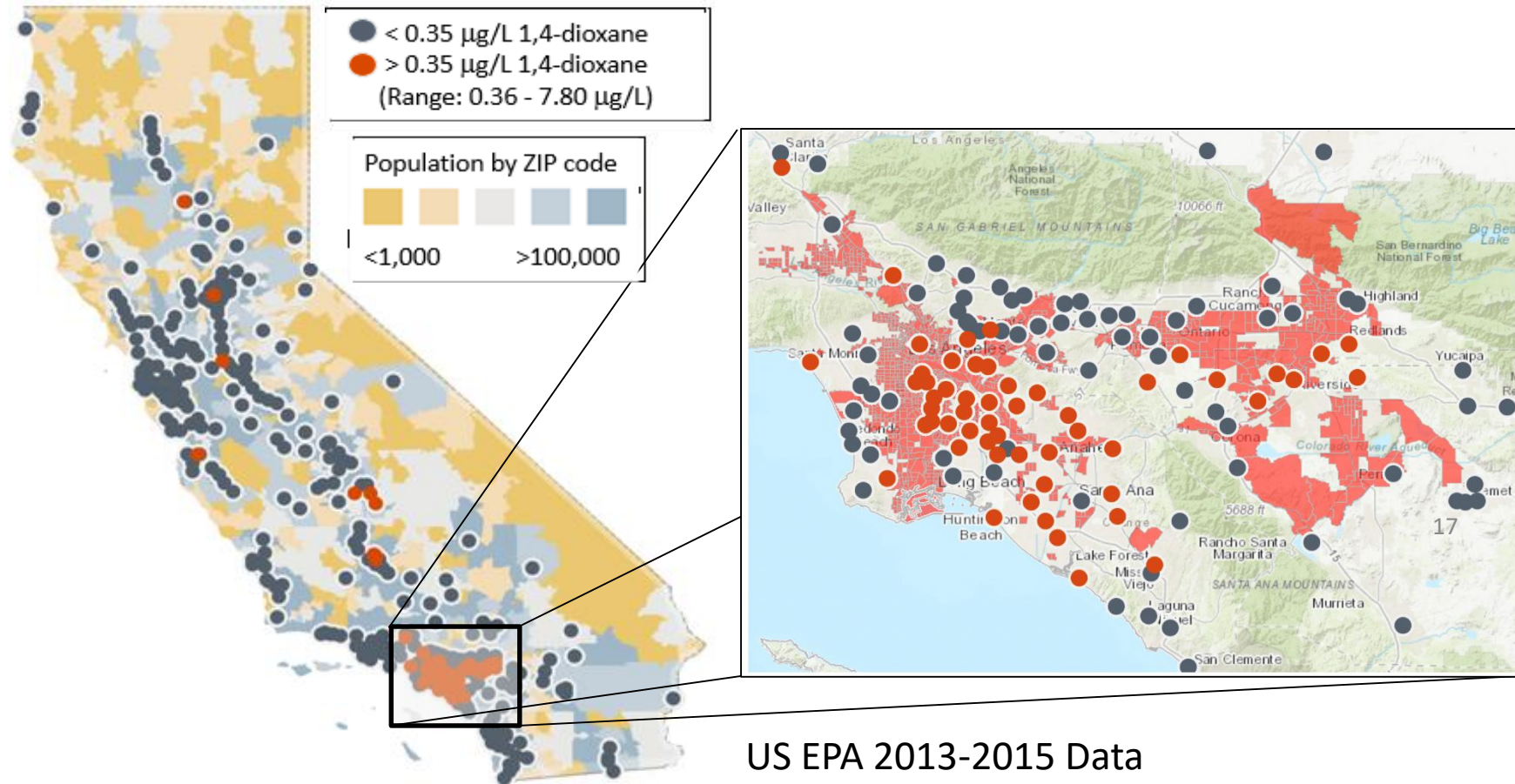
US EPA 2013-2015 Data

16

<https://oehha.ca.gov/calenviroscreen>



Sensitive Sub-Populations: Environmental Justice Communities



Sensitive Sub-Populations: Children

- Present in children's products
- Different product use patterns
- Higher surface area/body weight ratio
- Increased diffusion through skin



Impacts to Water Treatment Agencies

- Background 1,4-dioxane concentrations in wastewater effluent
 - Indicates widespread, constant input
- Standard treatments are ineffective
 - Specialized treatment is costly
- Particularly concerned about water treatment agencies generating recycled water
 - Permits limit 1,4-dioxane concentration



Questions to Stakeholders: Key Themes

- Theme 1. Potential 1,4-dioxane adverse impacts *(today)*
- Theme 2. Presence of 1,4-dioxane in personal care and cleaning products *(August 21)*
- Theme 3. Alternatives Analysis Threshold *(August 21)*



Next Steps

- Workshop August 21 in Sacramento
 - <https://dtsc.ca.gov/scp/safer-consumer-products-workshops-events/>
- CalSAFER Comment Period through August 21
 - www.calsafer.dtsc.ca.gov
- Consider feedback to inform possible Priority Products



QUESTIONS?

SaferConsumerProducts@dtsc.ca.gov

